

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property  
Organization  
International Bureau



(43) International Publication Date  
18 November 2004 (18.11.2004)

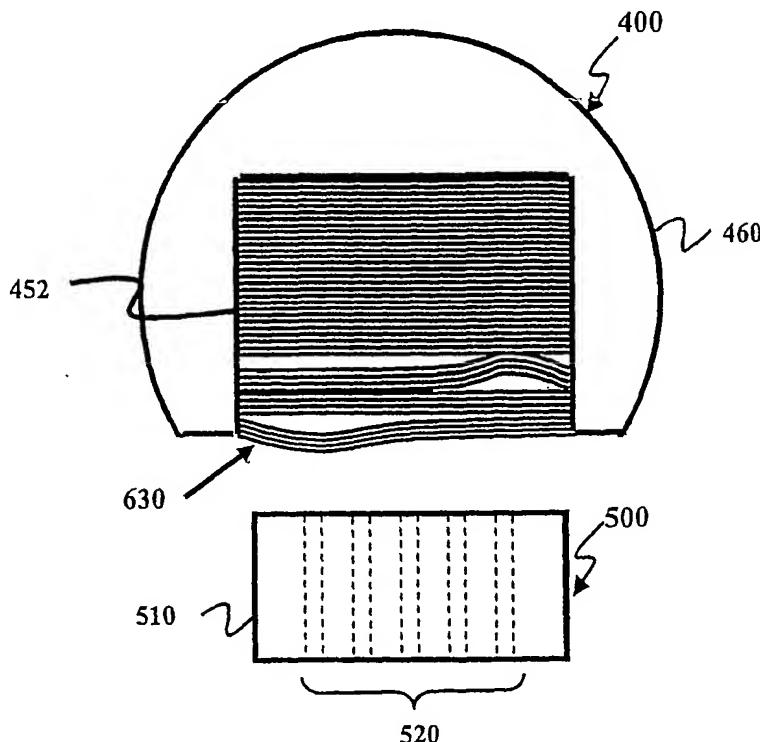
PCT

(10) International Publication Number  
WO 2004/100252 A1

(51) International Patent Classification<sup>7</sup>: H01L 21/68  
(21) International Application Number: PCT/AU2004/000594  
(22) International Filing Date: 7 May 2004 (07.05.2004)  
(25) Filing Language: English  
(26) Publication Language: English  
(30) Priority Data:  
2003902270 9 May 2003 (09.05.2003) AU  
(71) Applicant (for all designated States except US): ORIGIN ENERGY SOLAR PTY LTD [AU/AU]; 1 King William Street, Adelaide, SA 5000 (AU).  
(72) Inventors; and  
(75) Inventors/Applicants (for US only): WONG, Paul, Charles [NZ/AU]; 16 Mildara Place, West Pennant Hills, NSW 2125 (AU). ABNOOS, Razmik [AU/AU]; 4/162 Cullooden Road, Marsfield, NSW 2122 (AU). EVERETT,  
Vernie, Allan [AU/AU]; 2 Burnett Street, Kaleen, ACT 2617 (AU). KERR, Mark, John [AU/AU]; 2/2 Da Costa Avenue, Prospect, SA 5082 (AU).  
(74) Agent: SPRUSON & FERGUSON; GPO Box 3898, Sydney, NSW 2001 (AU).  
(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.  
(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI,

[Continued on next page]

(54) Title: SEPARATING AND ASSEMBLING SEMICONDUCTOR STRIPS



(57) Abstract: A method and an apparatus for separating elongated semiconductor strips (630) from a wafer (400) of semiconductor material are disclosed. Vacuum (500) is applied to the face of each semiconductor strip forming an edge of the wafer (400) or being adjacent to the edge. The wafer (400) and the source of the vacuum (500) are displaced to separate each elongated semiconductor strip (630) from the wafer (400). Further, a method and an apparatus for assembling elongated semiconductor strips (630) separated from a wafer (400) of semiconductor material into an array of strips (630) are disclosed. Still further, methods, apparatuses, and systems for assembling an array of elongated semiconductor strips (630) on a substrate are also disclosed.

WO 2004/100252 A1



SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ,  
GW, ML, MR, NE, SN, TD, TG).

*For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.*

**Published:**

— *with international search report*